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Letter to the Editor

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Carcinoid Tumor-Associated Paraneoplastic Polyneuropathy that Mimics Guillain–Barre Syndrome

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Dear Editor,

Paraneoplastic polyneuropathies are among the most common distal neurological complications of systemic cancer on the nervous system. All peripheral neuropathy types, such as demyelinating, axonal, motor, sensory, or autonomic, can present in association with cancer and can have a paraneoplastic etiology (1). Classical paraneoplastic peripheral neuropathy is typically a sensory neuropathy with subacute onset that can be seen in small-cell lung cancer patients (1,2). There are few studies mentioning the relationship between carcinoid tumors and neurological syndromes. These are generally studies on serotonin-associated myopathy (3,4). This paper presents the case of a patient with a carcinoid tumor having acute sensorimotor polyneuropathy and showing symptoms similar to Guillain–Barre syndrome.

The examination of a 62-year-old female (consent form was taken) who came with complaints of hypokinesia, pain, and weakness that started in the lower extremities and expanded to the upper extremities revealed right peripheral facial paralysis, muscle strength of 3–4/5 in all extremities with global areflexia, high gloves and stocking hypesthesia, and deep sensory impairment in the distals. The cerebrospinal fluid had 80 mg/dl protein, and it was cell-free. Her neurophysiologic examination results showed symmetric, sensorimotor, and demyelinating weighted mixed-type polyneuropathy. The carcinoid tumor was found, and the patient's symptoms relapsed six months later. Obvious recovery was seen in the patient whose tumor was treated. On discharge from the hospital, the patient's upper and lower extremity muscle strength had increased to up to 4/5; however, her global areflexia persisted.

In this case, a strong temporal relationship with the tumor, absence of other reasons that may cause polyneuropathy, and obvious clinical recovery with the treatment of the tumor led to making a diagnosis of paraneoplastic PNP. Although not checking antibodies that could support paraneoplastic polyneuropathy in our case was a drawback, the diagnosis was made with the improvement in the clinical picture after tumor resection. When the non-classical paraneoplastic syndrome of our patient and the inability to show the antibodies despite the presence of tumor are assessed together, a possible paraneoplastic syndrome diagnosis will be a more correct description (5).

There are very few cases of carcinoid tumors (Table 1) with a diagnosis of classical paraneoplastic syndrome (6). When patients with carcinoid tumor-related paraneoplastic syndrome in the literature were assessed, it was found that bronchial carcinoid tumors were more common and that it was not always possible to detect antineural antibodies (6). As in other paraneoplastic syndromes, they are important as they frequently develop before the diagnosis of cancer is made.

In the etiology of acute sensorimotor polyneuropathies, considering paraneoplastic syndromes in making the definitive diagnosis will be useful in terms of the making an early diagnosis of and treating cancer. In patients with paraneoplastic polyneuropathy, tumor research should also include carcinoid tumors.

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Table 1. Paraneoplastic neurological syndromes associated with carcinoid tumors in the literature It benefit from reference of six numbered

Patient	Clinical syndrome	Carcinoid localization	Antibody
1	Limbic encephalitis	Bronchial carcinoid	Anti-Ri
2	LEMS	Atypical carcinoid lung	Negative
3	LEMS	Atypical carcinoid lung	Not done
4	PCD	Gastric	Negative
5	CAR	Cervical	Not done
6	Intestinal pseudo-obstruction	Bronchial carcinoid	Anti-Sm
7	PEM	Atypical carcinoid lung	Not done
8	PNP	Cecum	Not done
9	Brainstem encephalitis	Midgut carcinoid	Anti-Yo
10	Sensory neuropathy	Bronchial carcinoid	Anti-Hu
11	Limbic encephalitis	Bronchial carcinoid	Negative
12	Myelopathy	Bronchial carcinoid	ANA

LEMS: Lambert–Eaton myasthenic syndrome; PCD: paraneoplastic cerebellar degeneration; CAR: carcinoma-associated retinopathy; PEM: paraneoplastic encephalomyelitis; PNP: paraneoplastic neuropathy. It benefit from reference of six numbered

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